

# MONTHLY WEATHER REVIEW

Acting Editor, Robert N. Culnan

VOL. 74, No. 1  
W. B. No. 1458

JANUARY 1946

CLOSED MARCH 5, 1946  
ISSUED APRIL 16, 1946

## NORTH ATLANTIC HURRICANES AND TROPICAL DISTURBANCES OF 1945

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[Weather Bureau, Washington, D. C., January 1946]

Highlighted by the most remarkable safety record in hurricane forecasting history, the season of 1945 is worthy of evaluation along several lines. New in the records of damage distribution was that of the Florida hurricane of September 11-19, in which over half of the total \$60,000,000 property loss was wrought in an area of less than 1 square mile at installations of the Richmond Naval Air Base. Also of interest is the hurricane of early October, which originated in the Caribbean Sea and retained the characteristics of a cyclone as it crossed Mexico and emerged on the Pacific Coast near Acapulco.

The hurricane season of 1945 established a record low mortality rate, never before approached in the annals of hurricane warning service. Three severe hurricanes reached the coast line of the United States, causing property damage in excess of \$80,000,000, but only seven lives were lost. Aircraft reconnaissance again played an important role in locating tropical disturbances and determining the strength of their circulations as a basis for predicting storm movement and issuing reliable warnings. Experiments with radar and seismographs, sponsored by the armed forces, indicated that aircraft reconnaissance and regular observational methods will be augmented soon with other valuable observational techniques.

Below are reviews of all North Atlantic hurricanes and tropical disturbances that occurred during the season of 1945. A synopsis of the important features of these storms is given in Table 4, and their tracks, numbered I to X chronologically, are plotted on Chart I.

I. *Hurricane of June 20-27.*—The first tropical storm of the 1945 season formed in the western Caribbean Sea between Swan Island and the coast of Honduras during the night of June 19. A definite circulation was observed on the 20th when the disturbance was about 100 miles west-northwest of Swan Island. From this location the storm, attended by moderate gales and squalls, moved through the Yucatan Channel and Gulf of Mexico to the vicinity of latitude 27.5° N., longitude 86.5° W., where it turned sharply northeastward and developed winds of full hurricane force as it approached the Florida coast. The crew of a reconnaissance plane which flew into the storm about 120 miles south of Apalachicola on the afternoon of the 23d, estimated winds of 100 knots at two observation points near the center. The storm diminished in intensity as it reached the west coast of Florida and passed inland between Brooksville and Dunnellon at about 4:00 a. m., June 24. The circulation remained intact as the storm crossed the peninsula, attended by exceptionally heavy rains and winds of 45 to 55 miles per hour, moving into the Atlantic about noon of the 24th, between Daytona Beach and St. Augustine, Fla. Over the Atlantic it regained hurricane intensity, as indicated by reports of winds reaching 70 miles per hour at Tybee

Island and Paris Island, while the center was moving northeastward some 60 miles offshore. It again lost force as it approached the North Carolina Capes, where the center passed over or very near Cape Hatteras about midnight of the 25th, accompanied by winds of about 50 miles per hour. Indications are, that, for the third time, the storm regained hurricane intensity as it moved northeastward over the open waters of the North Atlantic. The storm center reached a position south of Nova Scotia on the 27th, and thereafter weakened and disappeared.

Damage from this storm was not heavy, and no deaths or serious injuries were reported. Communications were disrupted over small areas, and there was some damage to crops and buildings resulting from excessive rains and flooding. A 24-hour rainfall of 10.42 inches at Tampa broke all previous records at that station. In most areas passage of the storm was more beneficial than damaging, as the heavy rains which accompanied it broke a 12-month drought which had become one of the worst in Florida's history.

II. *Weak tropical disturbance of July 19-21.*—This slight disturbance formed in the western Gulf of Mexico from a wave in the easterlies, and, through reconnaissance flights, a complete circulation was verified on July 19. Pilot balloon reports from stations along the coast later indicated that the circulation existed to at least 15,000 feet and probably extended to 20,000 feet. Despite this deep circulation, the disturbance remained weak throughout its 3-day history, and it is not likely that gales over 45 to 50 miles per hour were associated with it at the time of its greatest development. Occasional squalls and rough seas were encountered along the coast from Grande Isle, La., to Port Aransas, Tex., but by the time the center moved inland, the storm had dissipated to such an extent that only fresh winds and a few scattered squalls were reported.

III. *Tropical disturbance of August 2-4.*—This disturbance appeared east of the Lesser Antilles on August 1, moved west-northwestward between the islands of Guadeloupe and Dominica on the 2d, and during the 3d passed south of Puerto Rico. It crossed the southern coast line of the Dominican Republic west of Ciudad Trujillo on the 4th and dissipated as it moved inland. No winds over Beaufort force 9 (47 to 54 miles per hour) accompanied the storm at any stage.

IV. *Tropical disturbance of August 17-21.*—When first detected by aircraft reconnaissance on August 17, this storm was centered near latitude 17°-18° N., longitude 53°-54° W., and showed a circulation with highest winds of Beaufort force 7 to 8 (32 to 54 miles per hour). It reached its greatest development on August 18, when reconnaissance reported winds of 65 knots in the vicinity of latitude 19° N., longitude 61° W. From this point it

began to lose intensity as it continued on a west-northwest course, and, by the morning of the 20th, when the center reached the vicinity of Turks Island, the highest winds were only 35 to 40 miles per hour. Dissipation took place over the ocean between Cuba and the Bahama Islands during the night of August 20-21.

V. *Texas hurricane of August 24-29.*—During the period of August 25-29, the coastal area of Texas was lashed by one of the most intense hurricanes in Texas history. Damage at Corpus Christi and in other areas along the south coast was the heaviest since the destructive September storm of 1933. While the area affected by hurricane winds and gales associated with this storm was only moderate in size, records show that no hurricane of such intensity ever paralleled the coast of Texas for so great a distance. Fully two-thirds of the Texas coast and offshore islands were subjected to winds of full hurricane force.

The storm formed in an area of squalls which had persisted for several days over the Gulf of Campeche, near latitude 21.5° N., longitude 95° W. It rapidly developed into a hurricane during the morning of August 24 and began a northward movement at a rate of 8 to 10 miles per hour. This rate of forward movement continued during the 24th and 25th, but as the storm neared the coast on the 26th, the speed of translation dropped to about 5 miles per hour, a rate which was maintained until the center moved inland near Port Aransas. At this station a 20-minute lull in the wind between 1 a. m. and 2 a. m. on the 27th indicated passage of the calm "eye" of the storm. On the 27th the center also passed a short distance south of Seadrift, Tex., at about 10 a. m., and slightly north of Port O'Connor about 11 a. m. Neither place experienced a calm, although they are only 19 miles apart. Continuing a northeastward movement parallel to the coast, the storm began to recurve toward the northwest as it passed west of Matagorda and dissipated in the interior of Texas on the 29th.

Winds accompanying the storm were estimated as high as 135 miles per hour at Seadrift, Port O'Connor, and Port Lavaca. The lowest reliable barometer reading was recorded at Camp Hulén, Palacios, Tex., on August 27 about 3 p. m. It was 28.57 inches (967.5 millibars), only 0.02 inch higher than the low reported for Galveston in the disastrous hurricane of September 8, 1900. Other readings of 28.00 and 28.10 were reported but were believed doubtful. The slow forward movement of the storm center built up high tides, reaching as high as 15.0 feet at Port Lavaca on Lavaca Bay. Slow progression accounted also for excessive precipitation along the coast and for a considerable distance inland. At Houston, for instance, 9.39 inches fell in a 6-hour period ending at 2:30 a. m., August 28. Rainfall along the coast, estimated as high as 30 inches, added to the flooding and damage caused by the wind-impounded waters of the Gulf.

Three deaths were attributed directly to the hurricane: two men were drowned at Port Isabel when their small boat crashed into the jetties, and one person was killed about eight miles north-northeast of Houston in a small tornado that developed in the storm circulation on August 27. Prevention of loss of life was made possible by the evacuation of thousands of persons from low-lying areas and from buildings not expected to survive the destructive winds. Buildings were boarded up and other precautionary measures were taken before damaging winds reached the coast.

Heavy damage occurred to real estate, roads, bridges, boats, and oil field equipment in Nueces, San Patricio, Aransas, Calhoun, Matagorda, and Wharton Counties, while severe crop and livestock losses were sustained in

practically all middle and upper coast areas. Total damage to real property was estimated at \$5,883,000, while damage to crops, principally cotton, rice, and corn, amounted to about \$14,000,000. Cattle and poultry losses were estimated at an additional \$250,000.

Table 1 contains significant data on winds and pressures in this storm for selected stations.

TABLE 1.—*Meteorological data for Texas hurricane of August 24-29, 1945*

[All times eastern standard]						
Station	Date of observation	Lowest pressure (inches)	Time of lowest pressure	Highest wind velocity	Direction of highest wind	Time of maximum velocity
Brownsville	26	29.51	1:15 a. m.	40		1:00 a. m.
Corpus Christi (WBAS)	26	29.50	6:15 p. m.	56	N	7:40 p. m.
Corpus Christi (WBO)	26	29.48	7:45 p. m.	67	N	11:00 p. m.
Pt. Aransas	27	29.02		125	NE-NW	1:30 a. m.
Aransas Pass	27	29.27	3:00 a. m.	125	N-NW	
Rockport	27	29.21	5:00 a. m.	90-100	NW	3:30 a. m.
Austwell	27	28.98	7:00 a. m.	125	N	
Seadrift	27	29.10		135	NW	
Port Lavaca	27	28.92	12:35 p. m.	135		
Olivia	27			135		1:00 p. m.
Port O'Connor	27	28.60		105	E-W	1:30-3:30 p. m.
Palacios	27	28.57	3:00 p. m.	125	NE-E	2-4:00 p. m.
Collegeport	27	28.75	4:30 p. m.	135		4:00 p. m.
Buckeye	27	29.09	5:00 p. m.	90		4:00 p. m.
Matagorda	27	29.04	6:00 p. m.	120	S-SW	5-10:00 p. m.
Wadsworth	27			125	SE	5-7:00 p. m.
Blessing	27	29.04	5:10 p. m.	90	NE	5:00 p. m.
Bay City	27	28.84	9-10:00 p. m.	85-100	E-SE	
Freeport	27	29.55	9:00 p. m.	64-66	SE	9-12:00 p. m.
Galveston	27	29.70	8:40 p. m.	45		
Lissie	27			75		11:00 p. m.
New Ulm	28			60		4:00 a. m.
Ledbetter	28			60		5:15 a. m.

<sup>1</sup> Height above mean low tide.

<sup>2</sup> 5-minute maximum velocity.

<sup>3</sup> Estimated gust velocities.

<sup>4</sup> Anemometer cups blown away by wind registering 105 miles per hour.

VI. *Tropical disturbance of August 30-31.*—This disturbance formed in the Caribbean Sea east of Belize on the 30th and moved westward into British Honduras. Belize, over which the center passed on the 31st, reported an almost complete calm at 12:30 p. m. and a low pressure of 29.33 inches at 2:30 p. m. Winds of hurricane force did not accompany this storm at the surface, but it is believed that velocities of about 60 miles per hour marked its entire course. Actual wind damage was slight, but excessive rains and high tides resulted in flooding portions of Belize 2 to 3 feet.

VII. *Minor tropical disturbance of September 3-4.*—A slight disturbance moved northward out of the Caribbean Sea, across western Cuba and into the Florida Peninsula near Fort Myers during September 3-4. The lowest pressure reported was 29.77 inches, and circulation about the center was not strong. However, squalls of a tropical character, with winds reaching 40 miles per hour and gusts to 50 miles per hour, prevailed among the Keys and along the southeast Florida coast northward beyond Miami. The only damage reported was to small boats in Miami harbors.

VIII. *Disturbance of September 9-12.*—A slight disturbance was located east of the Leeward Islands on the 9th of September. It moved northwestward during the 10th, turned to northward along the 67th meridian on the 11th, and began to dissipate as it passed about 100 miles west of Bermuda on the 12th. This storm did not develop a well-defined circulation, although at the time it was centered northeast of the Leeward Islands reports from reconnaissance planes indicated winds of 60 miles per hour.

IX. *Severe Florida hurricane of September 11-19.*—This

storm, which totally destroyed the three lighter-than-air hangars at the Naval Air Station, Richmond, Fla., was, from the standpoint of property damage, the most destructive hurricane of the 1945 season.

It was first noted east of the Leeward Islands on September 11, and moving west-northwestward, passed north of Puerto Rico during the morning of the 13th and very near Turks Island on the night of the 13-14th. It began a gradual curvature to the northwest while passing over the Great Bahama Bank during the night of the 14-15th, and struck inland on the south Florida coast over the northern end of Key Largo about 3:30 p. m. on September 15. Moving inland, the center passed almost directly over the Homestead Army Air Base. After leaving the cities of the south coast, the hurricane traversed the swamplands of the Everglades for about 150 miles. La Belle, on Lake Okeechobee, was the only town to feel the full force of the winds in this area. Reports indicate that every house in town was damaged. By the time the center reached the rich citrus belt of Florida the central pressure had filled approximately an inch, and winds had dropped to velocities only slightly in excess of 75 miles per hour, an intensity which was apparently maintained until the center reached the Atlantic, near St. Augustine, about 10 p. m. of the 16th. Skirting the Georgia coast, the center again moved inland on the South Carolina coast near Paris Island, where winds of 80 to 90 miles per hour were reported. As the storm began to lose force over the Carolinas, excessive rains caused considerable

flooding, with resultant crop losses running into millions of dollars. Serious floods occurred along the Pee Dee and Cape Fear Rivers, with stages on the Pee Dee reaching the highest of record. The storm was traced as far north as Nova Scotia, where it dissipated on the 19th.

When the center of the storm passed almost directly over the Homestead Army Air Base, the station experienced a 50-minute calm and a barometer reading of 28.09 inches (951.2 millibars) at 4:55 p. m. on the 15th. Two hours earlier Carysfort Light reported a 20-minute lull and a barometer reading of 28.15 inches (953.3 millibars). The highest measured wind velocity observed during the hurricane was 138 miles per hour from the southwest at Carysfort Reef Light, located a few miles west of the point where the center reached the coast and opposite in direction from the center of the storm where the highest velocities are usually recorded. Turks Island reported gusts reaching 150 miles per hour. At Homestead Army Air Base, after instruments had failed, winds were estimated at 125 to 130 miles per hour, with gusts of 150 miles per hour. An extensive survey by structural engineers of wind damage to hangars of the Richmond Naval Air Base, and of permanent displacement and dishing of the steel-framed door leaves of these hangars, established similar estimates of wind force.<sup>1</sup>

Table 2 contains significant data on winds and pressures in this storm for selected stations.

<sup>1</sup> Joint Report on "Investigation of Destruction During Hurricane of Three Lighter-Than-Air Hangars of the U. S. Naval Air Station, Richmond, Fla.," presented at the 30th Annual Meeting of the Building Officials Conference of America.

TABLE 2.—Meteorological data for the Florida hurricane of Sept. 12-19, 1945

[All times eastern standard]

Station	Date of observation	Lowest pressure	Time of lowest pressure	Maximum wind velocity and direction for a 5-minute period	Time of maximum velocity	Extreme wind velocity and direction (fastest mile from register)	Time of extreme velocity	Velocity of extreme gust
Turks Island	14	28.84	1:30 a. m.					<sup>1</sup> 150
Clarence Town, Bahama Islands	14	29.56	3:00 p. m.			105		
Georgetown, Bahama Islands	14					75		
Alligator Light	15	29.47	2:30 p. m.	60 NW	3:14 p. m.	70 NW	3:14 p. m.	
Carysfort Reef Light	15	28.15	3:00 p. m.	123 SW	3:36 p. m.	138 SW	3:37 p. m.	
Tavernier, Fla.	15	29.31				90 NNW		
Homestead, Fla. (Army)	15	28.09	4:55 p. m.	130 SSW	5:15 p. m.			<sup>1</sup> 150
Richmond, Fla. (Navy)	15	28.14	5:45 p. m.			109		140
Miami, Fla. (WBO)	15	29.17	5:14 p. m.	86 SE	5:36 p. m.	107 SE	5:36 p. m.	
Miami, Fla. (WBAS)	15	29.16	6:05 p. m.			94 ESE	6:04 p. m.	107
Opa Locka, Fla. (Navy)	15	29.26	6:00 p. m.					100
Hillsboro Light	15	29.55	7:30 p. m.	83 E	7:30 p. m.	85 E	7:32 p. m.	
Belle Glade, Fla. (USE)	15	29.51	10:27 p. m.	62 ENE	10:35 p. m.	75 ENE	10:35 p. m.	<sup>1</sup> 9
Clewiston, Fla. (USE)	15	29.42	11:00 p. m.	64 ENE	10:30 p. m.	75 E	11:43 p. m.	83
Everglades, Fla.	15	29.52	11:30 p. m.	22 W	9:30 p. m.			
Naples, Fla.	16	29.46	1:00 a. m.	48 SSW	1:27 a. m.	60 SSW		
Fort Myers, Fla. (Army)	16	29.09	1:00 a. m.	55 NW	1:34 a. m.			79
Fort Myers, Fla. (WBO)	16	29.29	2:30 a. m.	55 NW	2:05 a. m.	57 NW	2:08 a. m.	68
Moore Haven, Fla. (USE)	16	29.30	2:00 a. m.	52 E	2:30 a. m.	80 E	2:30 a. m.	
West Palm Beach, Fla.	16	29.62	1:45 a. m.					82
Jupiter Light	16	29.67	2:00 a. m.	60 E	12:45 a. m.	62 E	12:45 a. m.	
Gasparilla Light	16	29.40	4:00 a. m.	42 WSW				
Egmont Key Light	16	29.62	8:15 a. m.	48 N	5:04 a. m.	52 N	5:04 a. m.	
Lakeland, Fla. (WBAS)	16	29.33	10:50 a. m.			66 NNE	10:50 a. m.	
Lakeland, Fla. (WBO)	16	29.33	11:20 a. m.	32 NE	7:31 a. m.	34 NE	7:30 a. m.	
Tampa, Fla.	16	29.55	11:30 a. m.	35 N	5:35 a. m.	40 NNE	6:15 a. m.	50
Anclote Light	16	29.61	1:45 p. m.	44 N	7:56 a. m.	51 N	7:59 a. m.	
Orlando, Fla.	16	29.29	2:28 p. m.			66 SE	1:28 p. m.	78
Melbourne, Fla.	16	29.54	2:45 p. m.	55 SE	12:50 p. m.	69 SE	12:50 p. m.	72
Sanford, Fla. (NAS)	16	29.29	3:45 p. m.	48 NE	2:24 p. m.	55 NE	2:26 p. m.	77
De Land, Fla. (NAS)	16	29.24	4:00 p. m.	38 NE	12:55 p. m.	44 NNE	12:55 p. m.	55
Dunnellon, Fla.	16	29.58	4:00 p. m.			35 NNE	1:15 p. m.	45
Cape Canaveral Light, Fla.	16	29.53	5:00 p. m.	69 S	1:34 p. m.	75 S	1:34 p. m.	
Cedar Keys, Fla.	16	29.67	5:30 p. m.			35 NE	1:15 p. m.	45
Daytona Beach, Fla.	16	29.27	5:25 p. m.			68 ESE	3:18 p. m.	
Ponce de Leon Light	16	29.27	4:30 p. m.	80 S	3:02 p. m.	90 S	3:02 p. m.	
St. Augustine Light	16			76 NNE	6:12 p. m.	81 NNE	6:13 p. m.	
Jacksonville, Fla. (NAS)	16	29.37	10:59 p. m.	55 N	8:10 p. m.	67 N	8:14 p. m.	78
Jacksonville, Fla. (WBO)	16	29.42	11:29 p. m.	37 NE	8:25 p. m.	42 N	10:05 p. m.	
Jacksonville, Fla. (WBAS)	16	29.39				44 NNE	8:27 p. m.	60
Jacksonville Beach, Fla.	16	29.22	11:40 p. m.			60 E	9:35 p. m.	
Fernandina, Fla.	17	29.36	12:25 a. m.			60 NE		
Brunswick, Ga.	17	29.38				54 NNE		63
Savannah, Ga.	17	29.39	6:45 a. m.	36 N	1:17 a. m.	39 N	1:19 a. m.	50
Paris Island, S. C.	17	29.29	6:45 a. m.			85 E		90
Charleston, S. C. (WBO)	17	29.47	9:45 a. m.	57 E	4:43 a. m.	65 E	2:26 a. m.	
Charleston, S. C. (WBAS)	17	29.47	12:10 p. m.			40 ENE	4:40 a. m.	70
Wilmington, N. C.	17	29.77	2:30 p. m.	32 SSE	1:08 p. m.	37 SSE	1:08 p. m.	48
Norfolk, Va.	18	29.94	4:00 a. m.	29 E	4:46 p. m.	34 E	4:49 p. m.	
Richmond, Va.	18	29.95	7:17 a. m.	24 NE	10:36 a. m.	27 NE	10:36 a. m.	

<sup>1</sup> Estimated.

Loss of life was prevented through evacuation by the Red Cross and other agencies of approximately 50,000 persons who would have been in dangerous locations along exposed beaches and tidal creeks. Four people were killed in Florida, among them the Chief of the fire department at the Richmond Air Base. Incomplete reports indicate that 22 deaths occurred in the Bahamas, largely in the Caicos Group of islands west of Turks Island.

Property damage was estimated at \$60,000,000, of which over \$50,000,000 was listed for Dade County, Fla. The path of greatest destruction was about 40 miles in width, including the towns of Perrine, Goulds, Princeton, Florida City, Homestead, Richmond, Redland, and South Miami. The city of Miami, although it experienced an extreme wind of 107 miles per hour, lay outside the zone of greatest destruction and did not suffer the severe damage wrought in neighboring communities to the south.

The following estimated figures on property damage and casualties resulting from the September hurricane were secured from reliable sources by the Weather Bureau.

TABLE 3.—Damage and casualties in Florida

Houses destroyed.....	1, 632
Houses damaged.....	5, 372
Number of persons killed.....	4
Number of persons injured.....	43
Cattle killed.....	400
Poultry killed.....	7, 000

ESTIMATED LOSSES

Property damage.....	\$40, 000, 000
Crop loss.....	10, 000, 000
Power and communications.....	1, 000, 000
Ornamental trees, shrubs, and timber.....	2, 000, 000
Small boats, piers, docks, seawalls, etc.....	1, 000, 000
Highways and bridges.....	100, 000
Livestock.....	15, 000
Total.....	\$54, 115, 000

The greatest single loss came in the total destruction of three lighter-than-air hangars at the Richmond Air Base. The huge structures, each 1,060 feet long, 300 feet wide, and over 180 feet high, began to disintegrate under the high winds, and almost immediately sparks created by falling roof members ignited high octane gas. Thousands of gallons burned furiously in each hangar; temperatures estimated to exceed 2,000° F., quickly consumed 25 blimps, 366 airplanes, and 150 automobiles in the three structures.

X. *Hurricane of October 2-4.*—The only disturbance of tropical character charted during October 1945 was first

detected in the western Caribbean near latitude 16° N., longitude 81°–82° W., on October 2. From this position the storm moved west-northwestward and passed about 50 miles south of Swan Island. Light sea swells, indicating a disturbance in the vicinity, were first noted during the afternoon of October 1. They increased in magnitude during the night and following morning, and by noon of the following day were very distinct, having a frequency of 7 per minute. Later the frequency dropped to 6 per minute at 4 p. m., and 5 per minute on the following morning, an indication that the storm was of considerable intensity. A plane on reconnaissance came on the storm while it was centered south of Swan Island, and the crew estimated winds at 85 knots (98 miles per hour) with a central pressure near 29.00 inches.

At Swan Island a maximum wind of 39 miles per hour from the east (extreme, 44 miles per hour), was experienced at 8:45 a. m., on the 3d, with occasional gusts at 60 miles per hour; the pressure was 29.57 inches at 5:10 a. m., on that date. Hundreds of coconut palms were uprooted on the island, and practically all banana trees were blown over. Other damage was slight.

Moving westward, the hurricane struck inland about 8 a. m., August 4, 60 to 80 miles south of Belize. Press reports indicate that three-fourths of the houses in Punta Gorda were flattened and that 40 houses were destroyed at Livingston on the Guatemala coast. Many were injured in towns along the coast, and one death was reported.

After passing inland the storm continued a westward course and lost force over Guatemala and Mexico. Reports indicate that a center, accompanied by heavy rain, was recognizable as far west as Acapulco on October 5, marking this hurricane as one of the rare tropical storms that have succeeded in maintaining a circulation as they passed from one ocean to another over Central America and Mexico.

Although there are several instances of North Pacific hurricanes traveling eastward across the Isthmus of Tehuantepec and entering the Gulf of Mexico, there is apparently only one other account of a tropical storm passing westward from the Caribbean Sea into the Pacific Ocean. This was the storm of September 19–October 8, 1921, which moved from the western part of the Caribbean into the Pacific Ocean, and then across the United States and the Atlantic Ocean to a point west of the British Isles. This complete track, covering a distance of approximately 7,000 miles, is the longest of any Mexican typhoon plotted. A complete account is carried on the reverse side of the North Pacific Pilot Chart for August 1944.

TABLE 4.—North Atlantic hurricanes and tropical disturbances of 1945

[Number of storm in table corresponds to number of path on Chart I]

Storm	Date	Area where first reported	Coast lines crossed	Maximum wind velocity reported	Lowest pressure reported <sup>1</sup>	Place of dissipation	Intensity	Remarks
I	June 20-27....	100 miles west-northwest of Swan Island.	Florida.....	115 miles per hour estimated from reconnaissance plane 120 miles south of Apalachicola.	988.5 millibars (29.19 inches) at Hatteras, N. C.	South of Nova Scotia.	Hurricane intensity over the Gulf of Mexico and Atlantic Ocean.	No loss of life or heavy property damage reported. Excessive rains, breaking 24-hour records at several stations, were more beneficial than harmful as they broke one of Florida's worst droughts.
II	July 19-21....	300 miles east of Brownsville, Tex.	Texas.....	No data.....	No data.....	Texas coast south of Corpus Christi.	Weak disturbance.	Occasional squalls and rough seas reported from Grand Isle, La., to Port Aransas, Tex.
III	Aug. 1-4.....	East of the Lesser Antilles.	Dominican Republic.	Beaufort force 9 (47-54 miles per hour) from a ship.	.....do.....	Southern portion of Dominican Republic.	Not of hurricane intensity.	No damage reported.
IV	Aug. 17-21....	Near latitude 17°-18° N., longitude 53°-54° W.	None.....	65 knots (75 miles per hour) estimated from reconnaissance plane near latitude 19° N., longitude 61° W.	.....do.....	Over the ocean between Cuba and Bahama Islands.	Near hurricane intensity on Aug. 18.	Reports from islands indicate that no damage resulted from this storm.
V	Aug. 24-29....	Bay of Campeche...	Texas.....	105 miles per hour at Port O'Connor, Tex. <sup>2</sup>	967.5 millibars (28.57 inches) at Camp Hulen, Palacios, Tex.	Interior of Texas..	Full hurricane....	One of the most intense hurricanes ever experienced on the Texas coast. Only three lives were lost, but property damage estimated in excess of \$20,000,000.
VI	Aug. 30-31....	East of Belize.....	British Honduras.	60 miles per hour reported from airplane east of Belize.	989.8 millibars (29.23 inches) at Belize.	Interior of British Honduras.	Not of hurricane intensity.	At Belize water overran the sea wall and flooded portions of the city to depths ranging from 2 to 3 feet. Considerable damage to crops and shipping.
VII	Sept. 3-4.....	Northwestern Caribbean Sea.	Florida.....	40 miles per hour and gusts of 50 miles per hour along the Keys and south Florida coast.	1,008.0 millibars (29.77 inches) in Florida Keys.	Southern Florida..	Minor disturbance	Slight damage to small boats in Miami harbors.
VIII	Sept. 9-12....	East of Leeward Islands.	None.....	60 miles per hour estimated from reconnaissance plane northeast of Leeward Islands.	No data.....	Atlantic Ocean west of Bermuda.	Not of hurricane intensity.	No damage to shipping has been reported.
IX	Sept. 11-19....	.....do.....	Florida.....	138 miles per hour from the southwest at Carysfort Reef Light.	951.2 millibars (28.09 inches) at Homestead Army Air Base, Homestead, Fla.	North of Nova Scotia.	Intense hurricane.	Most severe hurricane of the season. A total of 26 lives lost, 4 in Florida and 22 in the Bahamas. Total damage estimated at about \$60,000,000.
X	Oct. 2-4.....	Near latitude 16° N., longitude 81°-82° W.	British Honduras and Guatemala.	85 knots (98 miles per hour) estimated from reconnaissance plane south of Swan Island.	982.1 millibars (29.00 inches) estimated from plane south of Island.	Near Acapulco, Mexico.	Full hurricane....	Great destruction on coast of Central America near the British Honduras-Guatemala line.

<sup>1</sup> Reduced to sea level.<sup>2</sup> Cups torn from anemometer by winds registering a velocity of 105 miles per hour.